

Navy Region Southwest & National Marine Fisheries Service Salvage Rare Whale Carcass

Cooperative Efforts Provide Navy with Opportunity to Test Stranding Response Procedures

NAVY REGION SOUTHWEST (NRSW) personnel leveraged the stranding of a rare Bryde's whale as an opportunity to strengthen its network of resources and relationships with the National Marine Fisheries Service (NMFS) and Southwest Fisheries Science Center (SWFSC) and

provided marine mammal researchers at the San Diego Natural History Museum (SDNHM) a unique opportunity to study an uncommon carcass.

Early on December 8, 2014, Naval Base Coronado (NBC) Port Operations personnel discovered the carcass of a small 15-foot whale that

had washed up against one of the base's piers. Under a regional stranding assistance agreement between the Navy and NMFS, NRSW personnel immediately contacted NMFS SWFSC's Marine Biologist and Southern California Stranding Coordinator Kerri Danil.

Byrde's whale.
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Once on the pier, the team rolled the carcass over, right side up, and were amazed to discover three ridges on its head—the markings of a rare Bryde's whale.

There was no indication what caused the whale's death, and the only apparent link to the Navy was its location at the NBC pier. Because it was a cetacean (whale or dolphin), the Navy understood the carcass would garner some interest from NMFS.

Shortly after discovering the carcass, NRSW met with SWFSC at NBC for an initial investigation. The specimen, floating upside down, appeared to be a minke whale—the most plentiful rorqual whale in the world. (Note: A rorqual whale is in the family of large baleen whales (as a blue whale or humpback whale) having the skin of the throat marked with deep longitudinal furrows.) The coordinators realized that the body, small and fully intact, would make an excellent museum carcass. However, both the Los Angeles and San Diego museums of natural history declined the stranding coordinators' initial offer, on the assumption that it was a common minke whale.

This left NMFS with one requirement—salvage as much information as possible before discarding the carcass. Given its location next to a naval facility, NMFS and SWFSC would need time and Navy support to conduct the investigation. NRSW stranding coordinators engaged NBC Commanding Officer, Captain Christopher Sund, to explain the data collection process and requested more time. Captain Sund supported the effort, pleased to grant the requested 24 hours so as much data as possible could be collected.

Ventral pleats (grooves) along the jaw of the Bryde's whale carcass as it was found upside down at NBC piers.

Walter Wilson



NMFS West Coast Region and SWFSC stranding coordinators and NRSW marine biologists began a whirlwind process of coordination. By that afternoon, all three organizations had a plan in place to move the carcass the following morning. NBC Port Operations personnel agreed to move the carcass to the nearby carrier piers where a gantry crane could reach it for lifting. NMFS West Coast Region Stranding Coordinator Justin Viezbicke contracted a local trucking company to provide a truck that would allow SWFSC personnel to cut into the carcass and extract as much biological data as possible before transporting it.

On the morning of December 9, NBC Public Works personnel realized how difficult it was to move a carcass that weighed nearly 2,000 pounds. So they devised a makeshift metal ramp with a large wooden pallet that could be lowered into the water and positioned it under the carcass to lift it onto the pier. This solution averted the need to use various straps and slings gathered from Sea World and SWFSC and also ensured minimal damage to the carcass.

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NOAA SWFSC biologists collect initial sampling data at the NBC piers.
 Kerri Danil

ridges on its head—the markings of a rare Bryde's whale (*Balaenoptera brydei/edeni*).

Minke and small (juvenile) Bryde's (pronounced BROO-dez) whales are of similar size and form. But the tell-tale ridges indicated this animal was

far more unusual than it initially appeared. In fact, according to the International Union for Conservation of Nature and Natural Resources (IUCN) "red" list, the Bryde's whale's conservation status is "data insufficient." (For more information about the IUCN "red" list, visit

www.iucnredlist.org/news/support-the-iucn-red-list.)

Although common in tropical waters, Bryde's whale sightings off the California Coast are very rare. (Since 2000, there have been fewer than ten documented sightings.) However,

The Basics About the San Diego Natural History Museum

SDNHM'S MISSION IS to interpret the natural world through research, education and exhibits, promote understanding of the evolution and diversity of southern California and the peninsula of Baja California, and inspire in all a respect for nature and the environment. Museum personnel accomplish this mission by:

1. Emphasizing the unique and diverse region of southern California while maintaining a global perspective
2. Collecting and preserving scientific specimens for research and as a continuous record of the changing world for future generations
3. Serving as a center for the scientific study of biological diversity and evolution
4. Providing dynamic leadership in natural history and environmental education through exhibits, publications, and educational programs, and striving to make this outreach relevant to all the people of the San Diego region.
5. Fostering cooperative efforts in natural history research and education throughout the southern California region

For more information about the museum and its programs, visit <http://sdnhm.org>.



acoustic recordings suggest that the number of Bryde's whales off southern California is increasing, and this stranding may be an indication of that population increase.

Knowing that the retrieval of this uncommon species would arouse research interest, NMFS re-engaged the natural history museums in search of a possible home for the carcass. Within five minutes, SDNHM jumped at the chance. The museum's Director of Paleontology, Tom Deméré, explained the recovery's importance. "As with the death of any stranded cetacean (marine mammal), we try to make the best of a sad situation. In the case of the recent Bryde's whale carcass found floating in San Diego Bay, we were given a rare opportunity to study and sample a specimen of this uncommon species of rorqual."

Deméré said there is only one specimen of a Bryde's whale on the west coast. The Los Angeles Natural History Museum has its skull and associated baleen, but not the whole skeleton. Specimen KX0258, as this find was designated, will be the "only complete skeleton of a Bryde's whale on this coast and, with the recovery of the full baleen array, will be one of the only preserved specimens with both the skeleton and baleen."

The carcass required preparation before it could be transported to the museum. Fortunately, the contracted truck driver happened to be a volunteer for the San Diego Zoo and one of NBC's California least tern monitors. Having an understanding of natural history and an appreci-



NBC Public Works personnel raise the Bryde's whale carcass out of the harbor.
Walter Wilson



NBC Public Works personnel transfer the Bryde's whale carcass into the truck.
Walter Wilson



SDNHM Paleontologist Tom Deméré (left) and NAVFAC SW Marine Biologist Jessica Bredvik cut through the blubber and muscle of the carcass.

Walter Wilson

ation of the significance of this specimen, he offered to contact his employer for help. His employer, who owns a large agriculture operation in San Diego County, agreed that the specimen could initially be stored and examined at their farm.

On December 10, two days after specimen KX0258's discovery, the team of scientists from the Navy, NMFS, SWFSC and SDNHM gathered at the farm to flense the carcass and prepare it for museum collection. (Note: Flensing is the act of stripping the blubber or skin from, in this case, a whale.) As with any Navy operation, safety was a primary concern. In the confined truck bed, the team of five used a variety of large knives and sharp blubber hooks to remove the flesh from the carcass. The safety brief also covered the procedures and precautions necessary to ensure proper preservation of the carcass both for its museum display and for a detailed investigation on the cause of death.

Additional team members supported the flensing team by keeping the array of knives sharpened, ferrying sampling gear in and out of the truck, recording data, and taking pictures. Naval Facilities Engineering Command Southwest (NAVFAC SW) Marine Biologists Jessica Bredvik and Christiana Boerger were part of the team conducting the necropsy under the guidance of NMFS Marine Mammal Biologist Justin Greenman and SDNHM Paleontologist Deméré.

Both NAVFAC SW marine biologists described the flensing as an “awesome experience and learning opportunity.”

The NMFS stranding team also used this opportunity to conduct outreach with local school children. They provided classroom and assembly presentations on marine mammals, and explained the importance of studying salvaged specimens.

The fully intact baleen rack just after the stranding team removed it from the Bryde's whale carcass.

Walter Wilson



The team collected the entire skeleton and prepared it for burial in compost. In a few months, a completely cleaned skeleton will be available for the museum to study. Specifically, they hope to be able to describe its skull and eating habits. Such a study has not been done before and will be a welcome addition to the museum's research program. The museum will also add the whale's baleen rack to its display.

Deméré said, "The baleen will be an important addition to our growing sample of intact baleen racks and will provide significant comparative information for our ongoing research on the form and function of baleen."

The baleen rack is a filter-feeder system inside the mouth of certain whale species, including Bryde's. Baleen hair is similar to bristles and allows the whale to take water into its mouth and then push the water out through its baleen bristles, leaving food behind.

"I'm surprised the full baleen rack remained. When we removed it, it practically fell out," said Walt Wilson, NRSW marine biologist. When a baleen whale dies, it is not uncommon for the baleen rack to be the first portion of the carcass lost.

Cooperating in this team effort afforded the Navy a number of opportunities including:

- Helping federal regulatory partners gain a scientific research opportunity
- Testing the standard procedures of stranding response
- Providing invaluable training to marine biologists
- Successfully salvaging a rare specimen to be cataloged in a research facility.

Danil concluded, "I sincerely appreciated the support of the Commanding Officer and the amazing ability of NBC Port Operations and Public Works to move a two-ton carcass with ease. This, in combination with assistance from NAVFAC SW marine biologists, made the logistically challenging situation unfold with ease."

This cooperative approach to environmental stewardship of ocean resources reemphasized the open and positive relationship among regulators, the Navy, and the public. NRSW successfully leveraged this whale's demise as an



National Oceanic and Atmospheric Administration (NOAA)
California Stranding Coordinator Justin Viezbieke explains
the function of baleen to local school children.

Walter Wilson

opportunity to strengthen its network of resources and relationships with NMFS and SWFSC, while giving marine mammal researchers the unique opportunity to study a rare Bryde's whale—contributing to the knowledge base of this species for years to come. [🔗](#)

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